

What is claimed is:

1. An optical source device comprising:

a lamp;

a beam shaping optical system including a light uniforming element for uniforming a light intensity distribution in a plane perpendicular to the direction of propagation of the received emitting light of the lamp:

an optical deflector for changeably reflecting the received emitting light of the beam shaping optical system in either one of two directions; and

an optical reflector for reflecting light reflected in said one of two directions, along an axis of said one of two directions.

2. An optical source device as claimed in claim 1, wherein the optical reflector has a polarization converting element for aligning the polarization direction of the light entering the optical reflector, a liquid shutter element for receiving the transmitted light of the polarization converting element, and a mirror for reflecting the transmitted light of the liquid crystal shutter element.

3. An optical source device as claimed in claim 1, wherein the optical reflector is constituted so as to changeably reflect the incident light to the optical reflector in two directions, the light reflected in one direction of the two directions being reflected in the direction of the incident

light.

4. An optical source device as claimed in claim 1, further comprising:

an average ON ratio calculating unit for calculating the average ratio of the ON state of the light of a display screen in a predetermined period when the display screen constituted by the two-dimensional ON and OFF states of the light are displayed in the order of time; and

a control unit for controlling the respective driving states of the lamp, the optical deflector, and the optical reflector, based on the ratio of the ON state of the light outputted by the average ON ratio calculating unit.

5. An optical source device as claimed in claim 4, further comprising an optical sensor whose output signal is inputted into the control unit.

6. An optical source device as claimed in claim 4, wherein the control unit compares the predetermined value with the calculated average ON ratio and controls the quantity of light reflected by the optical reflector according to the results of comparison.

7. An optical source device as claimed in claim 6, wherein the predetermined value previously set in the control unit in correspondence with the amount of feature of the display screen determined based on the luminance value of the display screen.

8. A light source device comprising:

a lamp for emitting white light;

a beam shaping optical system including a light uniforming element for receiving the emitting light of the lamp and uniforming the intensity distribution of the emitting light in a plane perpendicular to the direction of propagation of the emitting light of the lamp;

a color separating element for separating the emitting light of the beam shaping optical system into a plurality of colors;

optical deflectors provided for a plurality of colors to changeably reflect the emitting light of the color separating element in either one of two directions, respectively; and

optical reflectors provided for the respective optical deflectors to reflect the light reflected in said one of two directions, along an axis of said one of two directions.

9. A light source device as claimed in claim 8, further comprising:

an average ON ratio calculating unit for calculating the average ratio of the ON state of the light of a display screen in a predetermined period for each of a plurality of colors when the display screen constituted by the two-dimensional ON and OFF states of the light corresponding to the plurality of colors are displayed in the order of time; and

a control unit for controlling the respective driving

states of the lamp, the optical deflectors and the optical reflectors based on the ratios of the ON state of light of the plurality of colors outputted by the average ON ratio calculating unit.

10. An optical source device as claimed in claim 8, further comprising optical sensors for the plurality of colors whose respective output signals are inputted into the control unit.

11. An optical source device as claimed in claim 10, wherein the control unit calculates increase rates of the plurality of colors, and compares the calculated increase rates of the plurality of colors with a previously set value, and in the case where the increase rates of the respective colors are less than the previously set value, it controls the amount of reflecting light of each optical reflector so that the increase rate of each optical reflector is the minimum value of the increase rates of the respective colors and, in the case where the increase rates of the respective colors are equal to or more than the previously set value, it controls the amount of reflecting light of each optical reflector so that the increase rate of each optical reflector is the previously set value.

12. A light source device as claimed in claim 11, wherein the value previously set in the control unit is changed in correspondence with the amount of feature of the display screen

